

2D/3D Profile Sensor

MLSL103 LASER

Part Number

weCat3D




- Compact, lightweight design – even suitable for robot applications
- Precise measuring range resolution X (> 1200 measuring points)
- Up to 3.6 million measuring points per second

2D/3D Profile Sensors project a laser line onto the object to be detected and generate an accurate, linearized height profile with an internal camera which is set up at a triangulation angle. Thanks to its uniform, open interface, the weCat3D series can be incorporated by means of the DLL program library or the GigE Vision standard without an additional control unit. Alternatively, wenglor offers its own software packages for implementing your application.

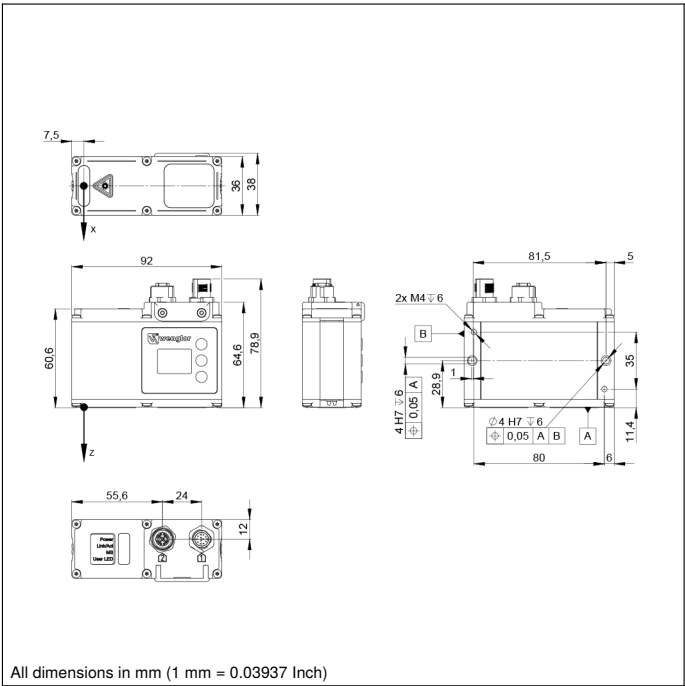


Technical Data

Optical Data			
Working range Z	90...280 mm		
Measuring range Z	190 mm		
Measuring range X	62...145 mm		
Linearity Deviation	95 µm		
Resolution Z	9,4...49 µm		
Resolution X	54...123 µm		
Light Source	Laser (red)		
Wavelength	660 nm		
Laser Class (EN 60825-1)	1M		
Environmental conditions			
Ambient temperature	0...45 °C		
Storage temperature	-20...70 °C		
Max. Ambient Light	5000 Lux		
EMC	DIN EN 61000-6-2; 61000-6-4		
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms		
Vibration resistance per DIN IEC 60068-2-6	6 g (10...55 Hz)		
Electrical Data			
Supply Voltage	18...30 V DC		
Current Consumption (Ub = 24 V)	300 mA		
Measuring Rate	200...4000 /s		
Subsampling	800...4000 /s		
Inputs/Outputs	4		
Switching Output Voltage Drop	< 1,5 V		
Switching Output/Switching Current	100 mA		
Short Circuit Protection	yes		
Reverse Polarity Protection	yes		
Overload Protection	yes		
Interface	Ethernet TCP/IP		
Baud Rate	100/1000 Mbit/s		
Protection Class	III		
FDA Accession Number	1610443-001		
Mechanical Data			
Housing Material	Aluminium; Plastic		
Degree of Protection	IP67		
Connection	M12 × 1; 12-pin		
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.		
Optic Cover	Plastic, PMMA		
Weight	290 g		
Web server	yes		
Push-Pull			
Connection Diagram No.	<table><tr><td>1022</td><td>1034</td></tr></table>	1022	1034
1022	1034		
Control Panel No.	<table><tr><td>X2</td><td>A22</td></tr></table>	X2	A22
X2	A22		
Suitable Connection Equipment No.	<table><tr><td>50</td><td>87</td></tr></table>	50	87
50	87		
Suitable Mounting Technology No.	<table><tr><td>343</td></tr></table>	343	
343			

Complementary Products

Connection cables
Control Unit
Cooling Unit ZLSK001
Protective Housing ZLSS003
Protective Screen Retainer ZLSS001
Software
Switch EHSS001

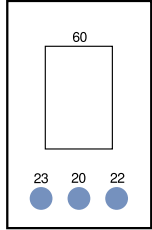
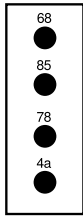


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

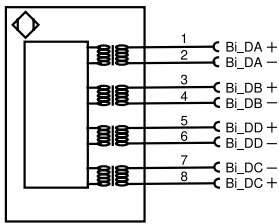
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X2

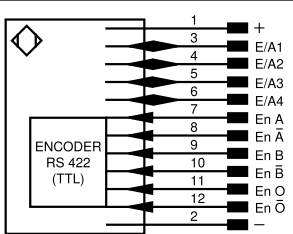


- 20 = Enter key
- 22 = Up key
- 23 = Down key
- 4a = User LED
- 60 = display
- 68 = supply voltage indicator
- 78 = Module status
- 85 = Link/Act LED

1022



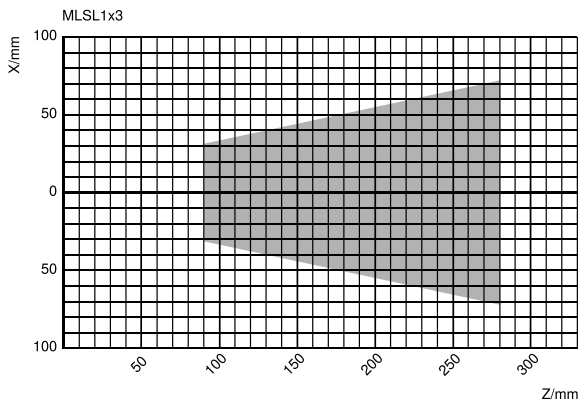
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Legend

+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARs422	Encoder A/A (TTL)		

Measuring field X, Z



Z = Working distance
X = Measuring Range

